

CLAIMS

What is claimed is:

- 1 1. A browser plug-in comprising:
2 a Personal Content Tunnel (PCT) object processor to process a PCT object
3 (PCTO) returned by a content server in response to a request from a client, the PCTO
4 containing PCT information;
5 a PCT resolution module coupled to the PCT object processor to resolve a
6 service uniform resource identifier (URI) using the PCT information according to a
7 PCT resolution protocol, the service URI identifying a PCT resolution server; and
8 a server interface to receive a content URI and a PCT termination point resolved
9 by the PCT resolution server.
- 1 2. The browser plug-in of claim 1 wherein the PCT information includes at
2 least one of a carrier type identifier, a PCT routing control parameter, a PCT session
3 time-out parameter, a bandwidth parameter, an authentication parameter, and the
4 service URI.
- 1 3. The browser plug-in of claim 1 wherein the PCT object processor
2 comprises:
3 a PCT object receiver to receive the PCT object via a Hypertext Transfer
4 Protocol (HTTP) link; and
5 a PCT object interpreter to interpret the received PCT object .
- 1 4. The browser plug-in of claim 3 wherein the PCT object interpreter
2 comprises:
3 a PCT object identifier to identify the PCT object based on a unique encoding
4 type.
- 1 5. The browser plug-in of claim 4 wherein the unique encoding type is the
2 Multipurpose Internet Mail Extensions (MIME).
- 1 6. The browser plug-in of claim 2 further comprising:

2 a session initiator to initiate a content delivery session between the client and a
3 local node using a carrier tunnel identified by the carrier type identifier, the local node
4 providing access to a content delivered from the content server.

1 7. The browser plug-in of claim 6 wherein the local node is one of a first
2 local content host and a broadband service node, the first local content host caching the
3 content, the broadband service node connecting to one of a second local content host
4 caching the content and the content server via a content server tunnel.

1 8. The browser plug-in of claim 7 wherein the carrier tunnel uses a
2 tunneling protocol, the tunneling protocol being one of a point-to-point protocol (PPP)/
3 layer two tunneling protocol (L2TP) and a PPP/ point-to-point tunneling protocol
4 (PPTP).

1 9. The browser plug-in of claim 6 further comprises:
2 a routing controller to establish a route for the content delivery session between
3 the client and the subnet containing the Internet Protocol (IP) address of the content
4 server, the subnet being identified by a network mask in the PCT routing control
5 parameter.

1 10. The browser plug-in of claim 2 further comprises:
2 an authenticator to authenticate the client using the authentication parameter,
3 the authentication parameter being one of a realm, a domain, a username, and a
4 password.

1 11. A method comprising:
2 processing a PCT object (PCTO) returned by a content server in response to a
3 request from a client, the PCTO containing PCT information;
4 resolving a service uniform resource identifier (URI) using the PCT information
5 according to a PCT resolution protocol, the service URI identifying a PCT resolution
6 server; and
7 receiving a content URI and a PCT termination point resolved by the PCT
8 resolution server.

1 12. The method of claim 11 wherein the PCT information includes at least
2 one of a carrier type identifier, a PCT routing control parameter, a PCT session time-
3 out parameter, a bandwidth parameter, an authentication parameter, and the service
4 URI.

1 13. The method of claim 11 wherein processing the PCT object comprises:
2 receiving the PCT object via a Hypertext Transfer Protocol (HTTP) link; and
3 interpreting the received PCT object.

1 14. The method of claim 13 wherein interpreting the received PCT object
2 comprises:
3 identifying the PCT object based on a unique encoding type.

1 15. The method of claim 14 wherein the unique encoding type is the
2 Multipurpose Internet Mail Extensions (MIME).

1 16. The method of claim 12 further comprising:
2 initiating a content delivery session between the client and a local node using a
3 carrier tunnel identified by the carrier type identifier, the local node providing access to
4 a content delivered from the content server.

1 17. The method of claim 16 wherein the local node is one of a first local
2 content host and a broadband service node, the first local content host caching the
3 content, the broadband service node connecting to one of a second local content host
4 caching the content and the content server via a content server tunnel

1 18. The method of claim 17 wherein the carrier tunnel uses a tunneling
2 protocol, the tunneling protocol being one of a point-to-point protocol (PPP)/ layer two
3 tunneling protocol (L2TP) and a PPP/ point-to-point tunneling protocol (PPTP).

1 19. The method of claim 16 further comprises:
2 establishing a route for the content delivery session between the client and the
3 subnet containing the Internet Protocol (IP) address of the content server, the subnet
4 being identified by a network mask in the PCT routing control parameter.

1 20. The method of claim 12 further comprises:
2 authenticating the client using the authentication parameter, the authentication
3 parameter being one of a realm, a domain, a username, and a password.

1 21. A computer program product comprising:
2 a machine useable medium having computer program code embedded therein,
3 the computer program product having:
4 computer readable program code to process a PCT object (PCTO) returned by a
5 content server in response to a request from a client, the PCTO containing PCT
6 information;
7 computer readable program code to resolve a service uniform resource identifier
8 (URI) using the PCT information according to a PCT resolution protocol, the service
9 URI identifying a PCT resolution server; and
10 computer readable program code to receive a content URI and a PCT
11 termination point resolved by the PCT resolution server.

1 22. The computer program product of claim 21 wherein the PCT
2 information includes at least one of a carrier type identifier, a PCT routing control
3 parameter, a PCT session time-out parameter, a bandwidth parameter, an authentication
4 parameter, and the service URI.

1 23. The computer program product of claim 22 further comprising:
2 computer readable program code to initiate a content delivery session between
3 the client and a local node using a carrier tunnel identified by the carrier type identifier,
4 the local node providing access to a content delivered from the content server.

1 24. The computer program product of claim 23 wherein the local node is
2 one of a first local content host and a broadband service node, the first local content
3 host caching the content, the broadband service node connecting to one of a second
4 local content host caching the content and the content server via a content server tunnel

1 25. The computer program product of claim 24 wherein the carrier tunnel
2 uses a tunneling protocol, the tunneling protocol being one of a point-to-point protocol

3 (PPP)/ layer two tunneling protocol (L2TP) and a PPP/ point-to-point tunneling
4 protocol (PPTP).

1 26. A system comprising:
2 a content server coupled to a network to provide a content;
3 a PCT resolution server coupled to the network to that resolves a service
4 uniform resource identifier (URI) using PCT information to a content uniform resource
5 identifier (URI) and a PCT termination point; and
6 a client coupled to a first broadband service node via a broadband medium, the
7 broadband service node coupling to the network, the client having a browser interfacing
8 to a browser plug-in, the browser plug-in comprising:
9 a Personal Content Tunnel (PCT) object processor to process a PCT
10 object (PCTO) returned by the content server in response to a client request
11 from the client, the PCTO containing PCT information,
12 a PCT resolution module coupled to the PCT object processor to resolve
13 a service uniform resource identifier (URI) using the PCT information
14 according to a PCT resolution protocol, the service URI identifying the PCT
15 resolution server, and
16 a server interface to receive the content URI and the PCT termination
17 point resolved by the PCT resolution server.

1 27. The system of claim 26 wherein the PCT information includes at least
2 one of a carrier type identifier, a PCT routing control parameter, a PCT session time-
3 out parameter, a bandwidth parameter, an authentication parameter, and the service
4 URI.

1 28. The system of claim 27 wherein the browser plug-in further comprising:
2 a session initiator to initiate a content delivery session between the client and a
3 local node using a carrier tunnel identified by the carrier type identifier, the local node
4 providing access to the content delivered from the content server.

1 29. The system of claim 28 wherein the local node is one of a first local
2 content host and a second broadband service node, the first local content host caching
3 the content, the second broadband service node connecting to one of a second local
4 content host caching the content and the content server via a content server tunnel

- 1 30. The system of claim 29 wherein the carrier tunnel uses a tunneling
2 protocol, the tunneling protocol being one of a point-to-point protocol (PPP)/ layer two
3 tunneling protocol (L2TP) and a PPP/ point-to-point tunneling protocol (PPTP).

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